

X Series I/O Modules

2CH RS232+2CH CAN BUS Module X5



X5 User Manual

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Shenzhen Beilai Technology Co.,Ltd

Website: <https://www.bliiot.com>

Preface

Thanks for choosing BLIIOT X series I/O modules. These operating instructions contain all the information you need for operation of X series I/O modules.

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Disclaimer

This document is designed for assisting user to better understand the device. As the described device is under continuous improvement, this manual may be updated or revised from time to time without prior notice. Please follow the instructions in the manual. Any damages caused by wrong operation will be beyond warranty.

Revision History

Revision Date	Version	Description	Owner
2025/7/4	V1.0	Initial Release	PH

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1 Introduction

1.1 Overview

X5 is an industrial-grade expansion module specifically designed for the ARMxy series of ARM embedded industrial computers. This module features electrical isolation, overvoltage protection, ESD protection, fault protection, and overcurrent protection circuitry to ensure stability and reliability in complex industrial environments.

1.2 Technical Specifications

Name	Parameter	Description
Power Supply	Operating Power	Internal Voltage
	Working Voltage	12V-24V
	Power Consumption	2W
RS232	Channel	2 Channels
	Maximum Baud Rate	RS232: 115kbps
	Data Bits	RS232: 5-bit, 6-bit, 7-bit, 8-bit (configurable)
	Stop Bits:	RS232: 1-bit, 2-bit (configurable)
	Parity	RS232: Odd parity, Even parity, No parity (configurable)
	Flow Control	RS232: Not supported
	Impedance	RS232: Input impedance 300 Ω, Output impedance 3 kΩ
	Measured Distance and Operating Baud Rate	RS232: 15 meters (baud rate ≤ 1200 bps)
	Supports Multi-Drop Communication	RS232: Not supported
	Communication Mode	RS232: Full-duplex / Half-duplex / Simplex
	Data Transmission Mode	RS232: Transmit and receive mode, Receive-only mode, Transmit-only mode
	Logic Level	Logic "1": 1.5 V
		Logic "0": 2.4 V
	Maximum Output Current per Channel	100mA (at 26°C)
Isolation Protection	2KVrms (built-in)	
Communication Cable	Shielded twisted pair cable	

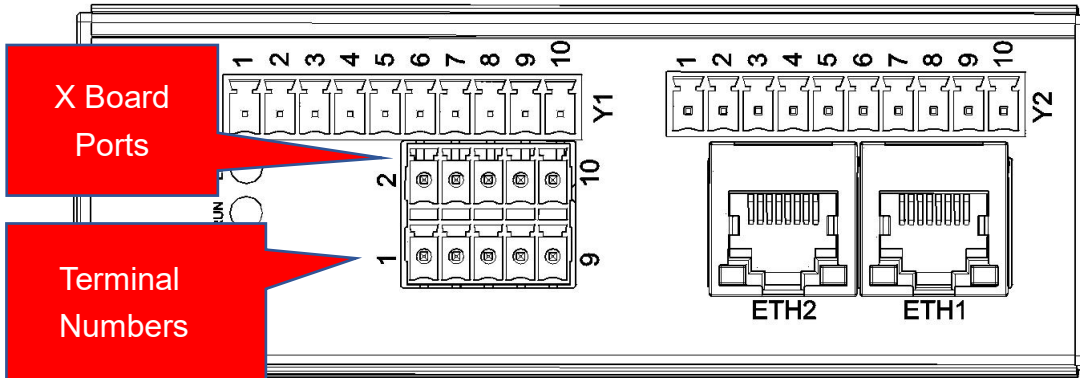
	Requirements	
CAN	Channel	2 Channel
	Transmission Mode	CAN BUS
	Maximum Baud Rate	Nominal Bit Rate: 1000Kbps Data Bit Rate: 5000Kbps
	Flow Control	Not supported
	Impedance	45KΩ
	Measured Distance and Operating Baud Rate	200 meters (baud rate = 500 Kbps)
	Multi-Node Communication	Support
	Logic Voltage	Logic "1": 3.5 V Logic "0": 1.2 V
	Maximum Output Current per Channel	100mA (26°C)
	Isolation Protection	2KVrms (built-in)
	Communication Cable Requirements	Shielded twisted pair cable
Certifications	EMC	IEC 61000-4-2 (ESD) Level 3
		IEC 61000-4-4 (EFT) Level 3
		IEC 61000-4-5 (Surge) Level 3

1.3 Model Selection

No.	Name	Model	Signal Type
1	2CH RS232+2CH CAN BUS	X5	RS232: Digital signal CAN: Differential signal

2 Wiring

2.1 Terminal Definitions

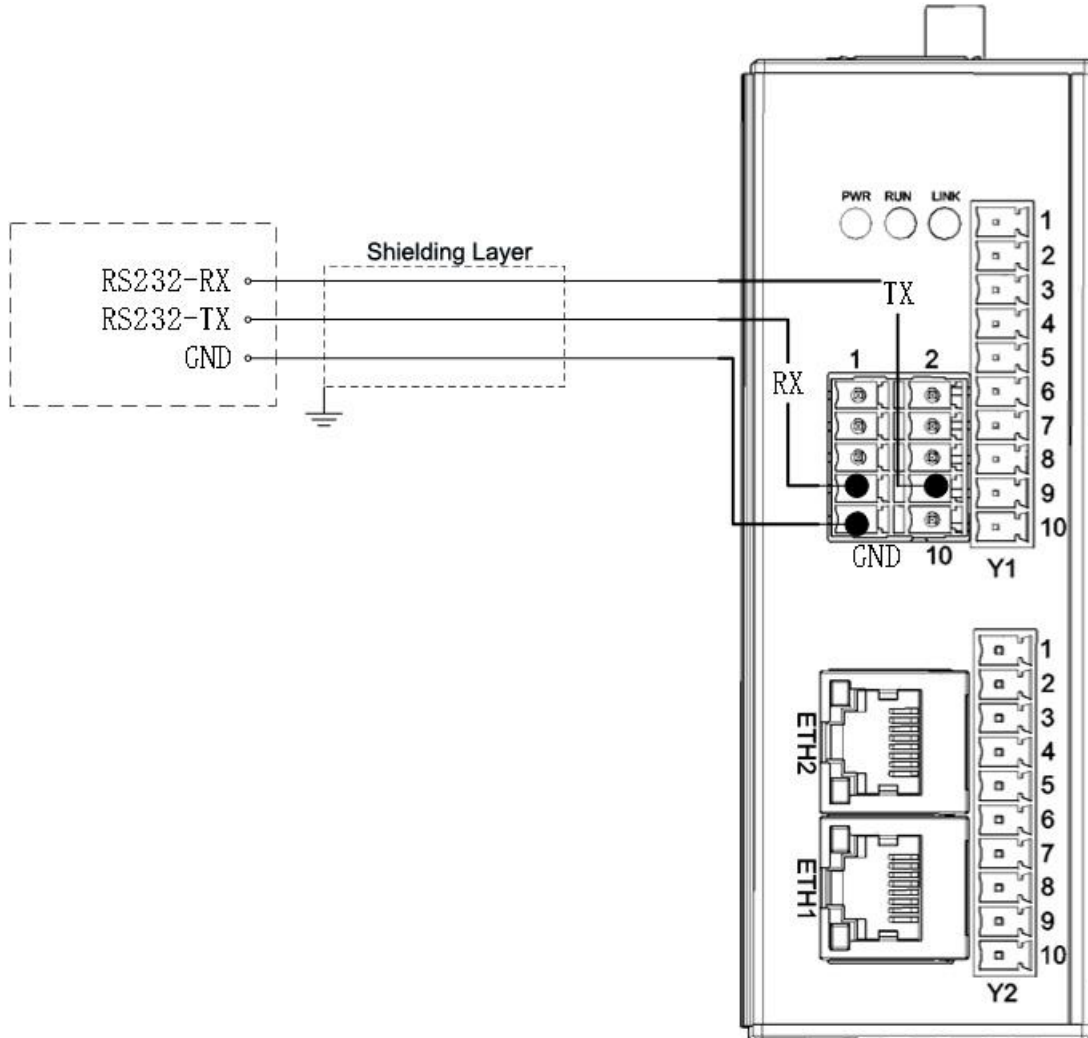


Notice: Please refer to the product's label for the specific terminal numbering sequence.

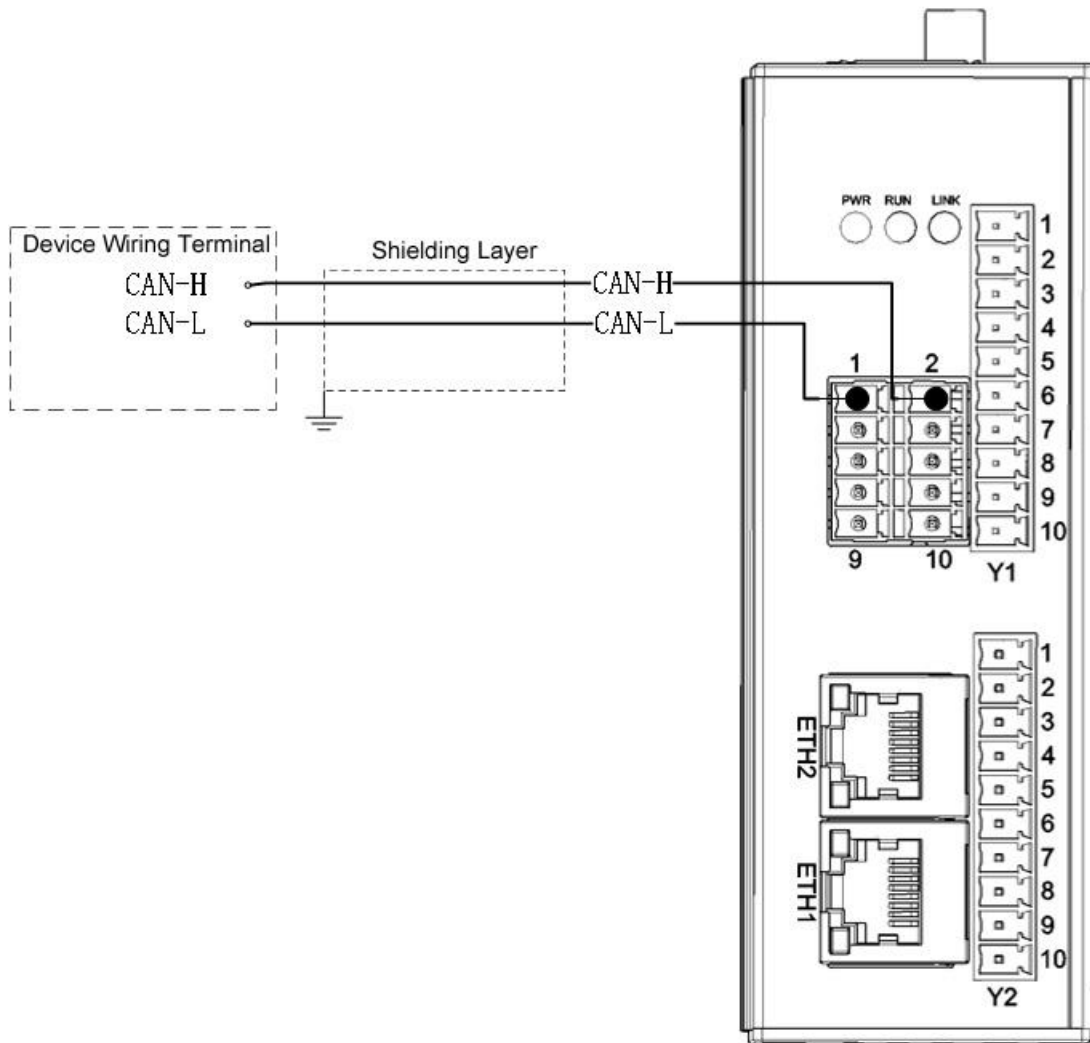
Terminal NO.	Definition	Description	Terminal NO.	Definition	Description
1	CAN Channel 0	CAN0-L	2	CAN Channel 0	CAN0-H
3	CAN Channel 1	CAN1-L	4	CAN Channel 1	CAN1-H
5	RS232 Channel 1	RS232-RX	6	RS232 Channel 1	RS232-TX
7	RS232 Channel 2	RS232-RX	8	RS232 Channel 2	RS232-TX
9	GND	Ground Terminal	10	PGND	Ground Terminal

2.2 Connection Example

2.2.1 RS232 Connection



2.2.2 CAN BUS Connection



3 Warranty Terms

- 1) This equipment will be repaired free of charge for any material or quality problems within one year from the date of purchase.
- 2) This one-year warranty does not cover any product failure caused by man-made damage, improper operation, etc

4 Technical Support

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